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Is labor export good development policy?

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Is Labor Export Good Development Policy?

by
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Abstract

Labor migration began to be promoted in the late 60s or early 70s by a number of Asian countries burdened by problems of unemployment, poverty, and scant foreign exchange. However, labor export was generally intended to be a stop-gap measure while governments were trying to implement policy reform to whip their economies into shape. Indeed, labor migration as policy has largely faded in many of our Asian neighbors but remains a major development policy plank in our country. What has made the Philippines specially cut out to be a labor exporter? What are the benefits and costs of migration? Is the export of labor sustainable? Are we content with being a labor exporter? Is there a need to rethink the country's labor export policy?

Is Labor Export Good Development Policy?

By

Ernesto M. Pernia*

"On the highways the people moved like ants and searched for work, for food. And the anger began to ferment." (John Steinbeck, *The Grapes of Wrath*, 1939).

1. Introduction

Migration from backward areas to the more advanced ones is an age-old human behavior. That the movement of people has accelerated in recent years attests to the persisting socioeconomic inequalities across nations, globalization and demographic structural shifts. Temporary labor migration gained traction in many Asian countries in the late 60s and 70s. This type of migration was, in fact, promoted by governments burdened by problems of poverty, unemployment, and shortage of foreign exchange. However, labor export was generally intended to be a stop-gap measure while governments were trying to implement policy reform to whip their economies into shape. Indeed, labor export as policy has largely faded in many Asian countries but remains a major development policy plank in the Philippines.

In this paper we argue that the Philippines appears to have been specially cut out to be a labor exporter owing mainly to twin policy failures that are by now stylized facts. On the one hand, unlike the other East and Southeast Asian economies, the Philippines failed to graduate in a timely manner from its post-war import-substitution industrialization policy toward export orientation and economic liberalization. On the other hand, while it was among the first in Asia to adopt a population policy in 1969, it failed to sustain the policy that is down to practically nil today. On the former policy mistake, it is probably reasonable to add that protectionism – which had among its policy instruments exchange and import controls, tax incentives, tariff structure and selective credit to preferred industries – helped nurture the culture of corruption that appears to be pervasive today.

The consequences of such failures are well-known, namely, weak long-term performance of the economy in the face of robust growth of population and labor force. Figure 1 shows the country's (a) GDP growth rate year-to-year that appears in a roller-coaster pattern, (b) long-run ("natural") GDP growth rate over the period 1970-2006 that looks virtually flat at around 4.0% throughout, and (c) population growth rate over the same period that diminishes slowly from 3.0% to 2.1%. The difference between (b) and (c) is of course the long-run GDP per capita growth rate averaging 1.45% over the period. Quite unimpressive, indeed.

This paper focuses on the effects of international migration and remittances on household incomes and well-being, poverty reduction, human capital investment, and regional

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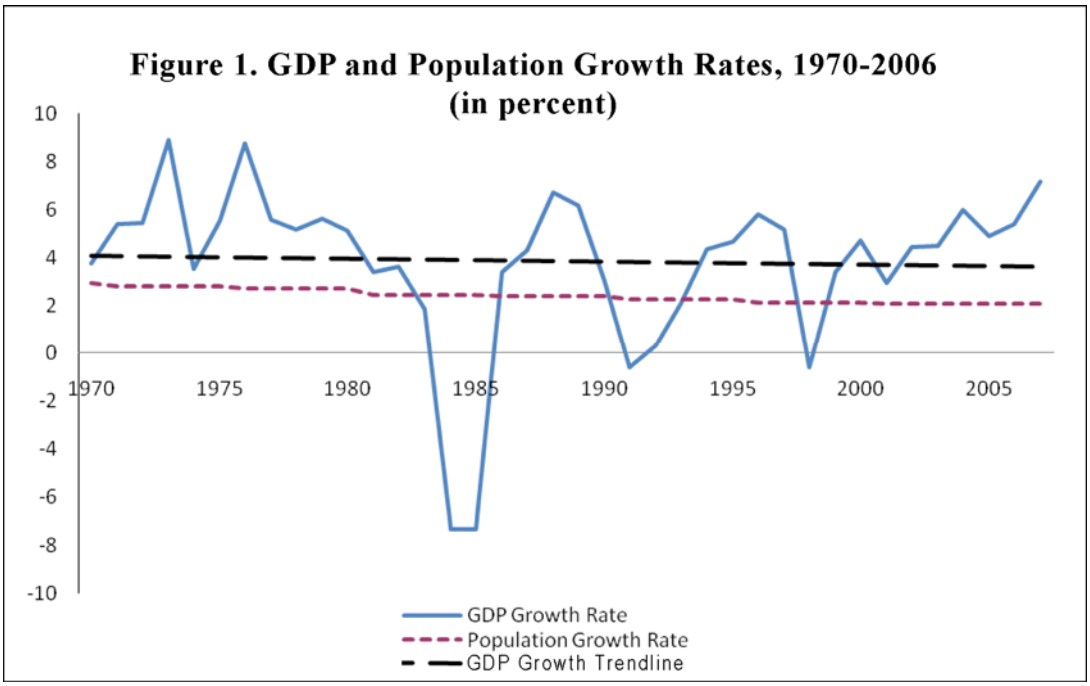
development in the home country. The next section briefly describes how the country's labor export policy evolved. The subsequent two sections review the international and local literature on the benefits and costs of migration and remittances. The fifth section discusses remittances in relation to domestic incomes and poverty reduction in the Philippines. The descriptive analysis is subsequently enhanced by an econometric analysis of the data. The paper concludes with the main points and some implications for policy.



2. Export of Labor as Policy

The Philippine government's policy to promote overseas employment began with the issuance by President Ferdinand E. Marcos of Presidential Decree 442, known as the Labor Code of 1974. This aimed to ensure "the careful selection of Filipino workers for the overseas labor market to protect the good name of the Philippines abroad". It also recognized the vital role of the private sector in the recruitment and placement of workers, locally and overseas (Article 25). The labor code further provided for the creation of the government machinery to institutionalize the overseas employment program, thereby creating the National Seamen Board, the Bureau of Employment Services, and the Overseas Development Board. These agencies were basically responsible for the recruitment and deployment of workers overseas.

The policy to encourage labor migration was given further impetus in June 1978 with Presidential Decree (PD) 1412. Article 12 of PD 1412 says it is state policy "To strengthen the network of public employment offices and rationalize the participation of the private sector in the recruitment and placement of workers, locally and overseas, to serve national development objectives". The decree also created the Overseas Employment Development Board (OEDB) and the Office of Emigrant Affairs, which were charged with the promotion, development, and regulation of Filipino overseas employment.

In 1980, Batas Pambansa 79 was passed creating the Commission on Filipinos Overseas and abolishing the Office of Emigrant Affairs. In January 1982, however, President Marcos issued Letter of Instruction 1190, which suspended all applications for private employment agencies in response to the proliferation of "more than 300 recruitment agencies". Shortly

thereafter, in March 1982, the President issued Executive Order (EO) 797 that reorganised the Ministry of Labor and Employment and created the Philippine Overseas Employment Administration (POEA), which assumed the functions of the OEDB and the National Seamen Board. LOI 1190, however, remained in force.

In March 1991, President Corazon C. Aquino issued EO 450 lifting the ban on new applications for recruitment agencies, effectively repealing LOI 1190. The reasons cited in EO 450 include taking advantage of new markets for Filipino labor, opening the recruitment market to new players and competition, and potentially increasing the inflows of "much needed" foreign exchange. In June 1995, Republic Act 8042 was enacted under President Fidel V. Ramos's watch to formalize the government's commitment to protect the rights and welfare of migrant workers, their families, and other overseas Filipinos in distress. This was prompted by the national furor over the execution of Flor Contemplacion, a domestic worker in Singapore, for the deaths of her Singaporean ward and another Filipino domestic worker (Commission on Population 2007)

In recent years, there has been much hype about the surge in remittances. It has boosted the peso, eased the debt burden, tamed inflation, and contributed in general to a rosy picture of the economy. These positive outcomes have encouraged the government to push further the policy of labor export, highlighted by President Gloria Macapagal-Arroyo's statement in early 2007 that the country should develop "super-maids" for employment in the advanced countries.

3. Migration

Because international migrants typically are among the better educated and experienced workers in the home country, their departure often results in a disruption of economic activity before the vacancies are filled. And even when these are filled, the situation may not be the same as before. Labor market responses would depend on the composition of emigration and the nature of labor markets in terms of flexibility, segmentation, and rates of un- and under-employment (Lucas 2005).

Another important effect of migration is on the quality of goods and services, reflecting the nature of replacement workers. A deterioration in quality would not be unusual, as is apparent in the quality of education and health services in the Philippines owing to the departure of highly trained teachers and health workers. For instance, health indicators are now lagging behind the Southeast Asian average despite the fact that the Philippines leads in the training of health professionals.[1] However, the deterioration could also be partly due to diminished real budgets for social services owing to the country's less than impressive economic growth and fiscal deficits (Manasan 2004).

Concerning the brain drain issue, Adams (2003) finds that international legal migration is largely the movement of educated persons, with the large majority of those moving to the United States and other OECD countries having secondary schooling or higher. However, he claims that although migrants are well educated, international migration does not take away a very large share of a country's best educated (in general, less than 10% of the college-

[1] For example, while infant mortality rate had dropped to 29 per thousand in 2001, it is higher than in Malaysia and Thailand; moreover, as much as 40% of women deliver babies without an attending physician, nurse or midwife.

educated or higher). Nonetheless, he admits that for a few labor-sending countries, international migration does result in brain drain.

Indeed, other authors argue that international migration leads to a significant loss of highly educated persons for a wide range of countries (Lowell 2002; Lucas 2005). Tan (2007) argues that, in the case of the Philippines, there is a creaming off of highly skilled nurses and blue-collar workers; to the extent that the education-training system is unable to produce comparable replacements, at least in the short to medium term, brain drain ensues.

In general, however, the losses to labor-exporting developing countries are not exactly easy to quantify. One aspect is the loss of public funds invested in the education and training of those who migrate, particularly permanent emigrants, which is a good argument for the need to reform the financing of tertiary education. Nevertheless, the brain drain is probably not an unmitigated bane as there are compensating benefits, such as remittances, other beneficial links that the emigrants develop and maintain with the home country, as well as return migration.[2] Adams and Page (2005), on the basis of cross-country data, show that international migration exerts a strong negative effect on poverty. On the average, a 10% rise in the share of international migrants in a country's population is associated with a 1.9% decline in the proportion of the population living below a US dollar-a-day poverty line.

3.1 Psychosocial costs of migration

While the economic costs and benefits of labor migration are relatively well known, this does not seem to be true of the psychosocial costs to migrants and their families. These costs would temper the positive economic effects of migration and remittances.

One early study by Fasick (1967) finds that the children of migratory agricultural workers in the United States suffer from severe educational retardation as they have to substitute for the work of their absent parents. Similarly, McKenzie (2006), on the basis of Mexican data, points out some unfavorable effects of migration, such as on child care (less breastfeeding and uncompleted schedule of vaccines). In addition, parental absence due to migration tends to have an adverse effect on the schooling of children, particularly of the more highly educated parents. Further, Aguilera-Guzman et al. (2004) observe that children of migrants in Mexico are more susceptible to such problems as drug abuse and absenteeism or dropping out of school.

Crawford-Brown (1999) describes children in the Caribbean waiting for their parents' return or to follow their parents abroad as "barrel children" in that they are compensated with barrels of goods and money sent by their parents. These children, observes Crawford-Brown, and later also Crawford-Brown and Rattray, 2002, are likely to suffer from such emotional and psychological problems as depression, withdrawal, and running-away behaviour due to the lack of parental contact and supervision.

Smith, Lalonde and Johnson (2004) find that serial migration can potentially disrupt parent-child bonding, adversely affecting the child's self-esteem and behaviour. Moreover, they observe that time apparently does not heal the parent-child rift once it has occurred. Further, Suarez-Orozco, Todorova and Louie (2002) argue that parental attempts at long-distance

[2] Good examples are the Chinese and Indian *diasporas* that are playing an important role in the continuing rise of FDIs into China and India. Likewise, both countries are experiencing return migration, either permanent or circular.

relationships (e.g., via the telephone) fall short of the objective and only result in parental guilt and depression.

The separation of parents due to migration also often results in family breakdown (Scalabrini Migration Center 2005). Apart from the psychosocial disadvantages that befall the children, OFWs themselves have to bear various psychosocial costs in their work places. With the feminization of migration, female overseas Filipino workers (OFWs) in particular in various parts of the world are subjected to violence and abuses (Estopace 2002). Women hired as domestic helpers and entertainers are especially exposed to serious hazards to health and life, including sexual harassment and exploitation, rape, and sexually transmitted diseases and HIV/AIDS (Asis et al. 2005).

4. Remittances

Remittances to developing countries are reported to have risen more than fivefold from US $30 billion in 1990 to $170 billion in 2005 (World Bank 2006). The Philippines is reputed to be the world's fourth highest remittance recipient country after India, China, and Mexico. In 2006, remittances were officially recorded at U.S.$12.8 billion – up 20% from the preceding year – and totalled $14.4 billion by the end of 2007. This amount compares with 2005 estimates of $23.5 billion for India, $22.4 billion for China, and $21.7 billion for Mexico (World Bank 2006). However, relative to GDP, remittances for the Philippines now represent at least 10% of GDP – the highest among the four countries.

The level of international remittances appears to be significantly associated with poverty reduction. For example, Adams and Page (2005) find that a 10% increase in the share of remittances in a country's GDP is associated with a 1.6% drop in poverty incidence.[3] In general, however, since labor migrants tend to come from the not-so-poor households, it is the lower-middle to middle-income families who directly gain from remittances. In Latin America, Acosta, Fajnzylber and Lopez (2007), for example, find that the proportion of remittance recipient households who are poor varies considerably across countries. Only in some countries are remittance recipients predominantly poor, as in Mexico and Paraguay where 61% and 42% of recipient households, respectively, belong to the first income quintile.

The poorer households could benefit from remittances mainly in subsequent rounds via multiplier effects from increased consumption and investment spending. The size of the multiplier effect may hinge on whether remittances are received by rural or urban households, with the former typically consuming more local products, thereby creating a larger multiplier effect (Adelman and Taylor 1990). How much of the remittances will be spent for consumption and how much for investment by the recipient families themselves, or investment by others from the saved remittances, will depend on the investment climate in the locality (Pernia and Salas 2005).

The economic consequences of remittances can be considered at the micro, meso and macro levels. At the household level, a substantial portion of migrant workers' earnings are typically

[3] Cross-country regressions, however, are hampered by certain shortcomings, such as the inter-country differences in concepts, definitions and measurements of the variables used. These exercises need to be complemented or validated by country-specific studies using household survey data and other sub-national data, as is done in this paper below.

remitted to family members in their home communities. Remittances serve to enhance family incomes, as shown by a number of studies in various countries. Acosta, Fajnzylber and Lopez (2007) find that remittances appear to lower poverty levels in several Latin American countries although the impact varies across countries and, on balance, tends to be modest.[4] Latapi and Janssen (2006) provide empirical evidence on the poverty-alleviation effect of remittances specifically in Mexico. In Guatemala, Adams (2006) shows that internal remittances appear to reduce poverty somewhat more than do international remittances. In the case of Lesotho, Gustafsson and Makonnen (1993) find that if not for remittances another 11-14% of households would fall below the poverty line.

In the Philippines hit by a recession owing to the Asian financial crisis (1997-98), Yang and Martinez (2006) find that the appreciation of the remittance currency resulted in higher household remittance receipts. These, in turn, led to a notable fall in poverty incidence in remittance-receiving households, with positive spillovers to households without remittances, possibly allowing improved consumption smoothing (Tullao, Cortes and See 2007).[5] Sawada and Estudillo (2006) report a similar outcome as remittances represent an income transfer low-income households and an increase in gifts to other households. However, remittances appear to lead to higher income inequality (Gini ratios) as they tend to benefit more the higher income deciles (Rodriguez 1998; Tullao, Cortes and See 2007).

Other authors say that the inequality effect is not straightforward. Chimhowu, Piesse and Pinder (2005) argue that remittances increase inequality and social differentiation between recipient and non-recipient households. Carling (2005), on the other hand, argues that migration and remittances would initially worsen inequality when migration costs are high but would eventually improve it as lower-income households are able to afford the lower migration costs. The consensus seems to be that the effect of remittances on inequality depends on the opportunities for migration.

One issue that has been raised is the extent to which family members in remittance recipient households may reduce their work effort – a moral hazard effect on labor supply. There is evidence of a decline in labor force participation among remittance recipients – more among females than males – in El Salvador (Acosta 2007) and in the Philippines (Rodriguez and Tiongson 2001; Tullao, Cortes and See 2007), with the gender effect depending on whether the wife or the husband is the recipient (Cabigen 2006). As well, a reduction in labor force participation is noted in China and in Jamaica as the reservation wage increases (Rozelle, Taylor and DeBraw 1999; Bussolo and Medvedev 2007). But this appears to be matched by an increase in entrepreneurial activities, such as microenterprises for women and self-employment for men (Acosta 2007; Yang 2004; Rozelle, Taylor and DeBraw 1999).

The extent to which remittances are spent on consumption or on investment continues to be a debated issue. However, remittances are a fungible resource to the recipient household. Hence, the issue is not really whether the money received is actually invested but whether households whose incomes are increased by remittances save more and such savings become available for investment in the local or macro economy. Adams (2006) finds that households receiving internal and international remittances in Guatemala spend less of their incremental income on consumption than do households without remittances. The former type of

[4] The Latin American countries include Bolivia, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Paraguay, Peru, and the Dominican Republic.

[5] Burgess and Haksar (2005), however, find no clear empirical support for the purported short-term stabilizing effect of remittances on consumption in the Philippines.

households tend to spend more on investment, particularly in education, than the latter. In Pakistan, Mansuri (2007) finds that households with return migrants invest significantly more compared with non-migrant households and those whose migrant members are still working abroad.

Expenditures on education, housing and land are of course also important forms of investment.[6] According to Mansuri (2007), remittances have a positive and significant effect on child education and health in Pakistan, with a gender-equalizing effect as the gains for girls are appreciably greater than those for boys. Moreover, with better access to schooling, children in remittance recipient households tend to work substantially fewer hours.

Regarding Latin America again, Acosta, Fajnzylber and Lopez (2007) suggest that the effect of remittances on the educational attainment of children is generally restricted to children with low levels of parental schooling. As to health outcomes, they observe that in Guatemala and Nicaragua remittances positively affect children's health, especially in poor households. Likewise, Edward and Ureta (2001) note that remittances prolong a child's education in El Salvador.

In the Philippines, Yang (2004) finds that households, whose overseas workers experienced favorable exchange-rate shocks, were able to reduce child labor, increase educational spending, improve child schooling, and afford higher ownership of durable goods. Likewise, Tullao, Cortes and See (2007) note that remittances lead to higher human capital investment (education and health).

Acosta (2007) argues, in the context of El Salvador, that obtaining education and spending more quality time on parental duties or home production are growth-promoting activities. Likewise, when remittance-recipient families hire outside labor, a positive spillover effect on the local community is generated, or when they purchase capital goods, labor productivity is enhanced.

At the meso level, Pernia (2007) finds that in the Philippines the more developed regions send more overseas Filipino workers (OFWs) than the less developed ones, resulting in appreciably greater shares of total remittances going to the former. However, OFWs from the poorer regions tend to remit home bigger average amounts than those from the richer regions. This may be attributed to greater altruism on the part of OFWs from poorer regions towards their more deprived families. Another explanation – not at variance with the first – is higher positive selectivity of migrants from the less developed regions, i.e., more highly skilled and, hence, earning higher average incomes. An implication is that while remittances overall may contribute to a widening of the economic disparities across regions, they appear to lift the well-being of poor households even in the lagging regions.

At the macroeconomic level, remittances have become a major source of foreign exchange, especially for developing countries beset by fiscal deficits, external debts, persistent trade imbalances, and scant foreign direct investment. Foreign exchange inflows, however, often exert upward pressure on prices, requiring skillful monetary management that often includes sterilization, although in the Philippines with its dependence on imports, the effect on prices has been the opposite. Moreover, these inflows may spur a real appreciation of the exchange

[6] These investments reflect a rational behavior on the part of the family particularly when the investment climate is unfavorable or other investment vehicles are not readily available.

rate, thereby constraining the development of export-oriented and import-competing industries.

This phenomenon has been likened to the "Dutch disease" problem of Indonesia brought about by the boom in oil exports income, as observed by Quibria (1986) for Asia; Acosta, Lartey and Mandelman (2007) for El Salvador; Bussolo and Medvedev (2007) for Jamaica; and Lopez, Molina and Bussolo (2007) for Latin America in general. Further, the remittance windfall may have a moral hazard effect as the government softens in pursuing policy reform or improving governance while people are lulled into complacency, as appears to be happening in the Philippines.

5. Remittances, Household Incomes, and Poverty

One approach to analyzing the effect of remittances on incomes or on poverty reduction is to look at the quintile distribution of households without and with remittances. For this exercise, merged data from the Family Income and Expenditure Survey (FIES), Survey of Overseas Filipinos (SOF), and Labor Force Survey (LFS) are used. These surveys are carried out by the National Statistics Office (NSO) at regular intervals. International remittance is defined to include cash receipts, gifts, support, relief and other forms of assistance from abroad.

5.1 International remittances and domestic incomes

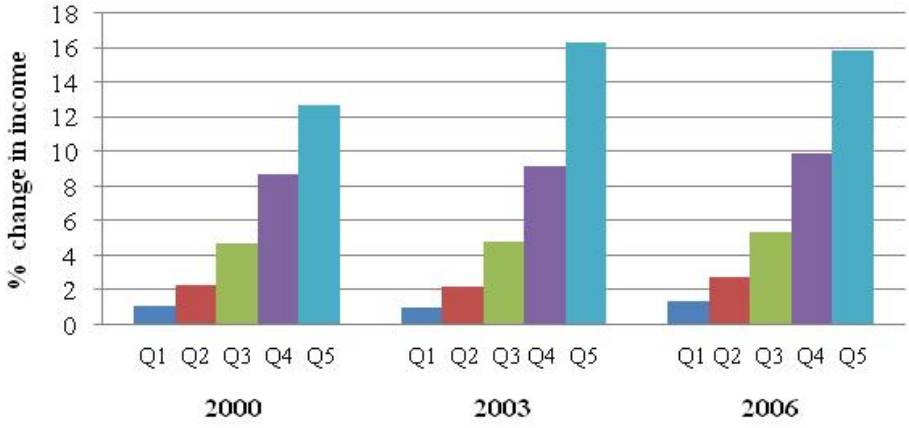
Table 1 shows that the mean remittance amount received by households (cols. 3 & 6) increases monotonically with income quintile in both 2000 and 2006. The positive effect of remittances on household incomes also rises monotonically from 1.0-1.4% for the lowest quintile to 4.7-5.4% for the middle quintile and 13-16% for the top quintile (cols. 4 & 7). This is shown graphically (including for year 2003) in Figure 2.

Table 1. Household income in pesos without and with remittance by quintile (all households), 2000 & 2006

(1) Income quintile	2000			2006		
	(2) Income w/o remittance	(3) Mean remittance	(4) Remittance raises income by (%)	(5) Income w/o remittance	(6) Mean remittance	(7) Remittance raises income by (%)
1	31,731.3	333.8	1.1	41,521.0	582.6	1.4
2	56,422.7	1,318.0	2.3	72,885.9	2,050.4	2.8
3	86,311.1	4,084.9	4.7	111,711.5	6,047.7	5.4
4	136,862.9	11,877.6	8.7	180,767.7	17,860.4	9.9
5	351,941.0	44,623.4	12.7	456,781.9	72,473.0	15.9

Note: **International remittance** is defined to include cash receipts, gifts, support, relief and other forms of assistance from abroad.
Source: Family Income and Expenditure Survey (FIES), 2000 (sample: 39,608 households) & 2006 (sample: 38,483 households).

Figure 2. Percentage change in household income due to remittance by quintile (all households), 2000-2006



As Schiff (2006) points out, while the effect of remittances on the poor may be limited, it is likely to be larger for those poor households with migrants who remit. Table 2 and Figure 3 present data focusing on remittance-receiving households. Here, the poorest quintile has the lowest share (4-7%) of households receiving remittances and this goes up consistently to 36-45% for the richest quintile (cols. 2 & 6). The impact of remittances on household incomes is indeed larger for all income groups but still greater for the upper quintiles than for the lower ones, rising from 35% for the first quintile to 49 % for the fifth in 2000 (col. 5). In 2006, with household nominal incomes without remittances significantly higher than in 2000, the effect of remittances appears more muted for all quintiles but still rising steadily from 19% for the poorest to 35% for the richest (col. 9).

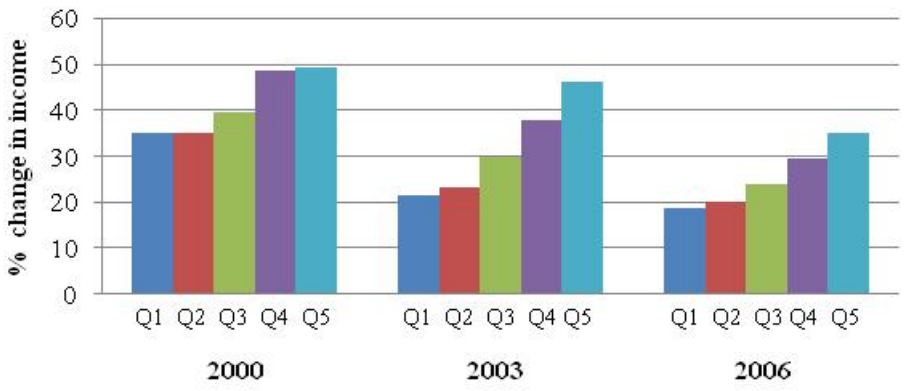
Table 2. Household income in pesos without and with remittance by quintile (households with remittance), 2000 & 2006

(1) Income quintile	2000				2006			
	(2) HHs receiving remittance (%)	(3) Income w/o remittance	(4) Mean remittance	(5) Remittance raises income by (%)	(6) HHs receiving remittance (%)	(7) Income w/o remittance	(8) Mean remittance	(9) Remittance raises income by (%)
1	3.8	25,224.0	8,861.1	35.1	7.0	44,507.0	8,303.2	18.7
2	8.6	43,818.3	15,325.9	35.0	13.6	74,540.3	15,032.5	20.2
3	15.7	65,970.8	26,027.1	39.5	22.1	113,311.6	27,308.6	24.1
4	24.2	101,667.1	49,184.6	48.4	33.3	182,944.9	53,709.4	29.4
5	35.8	254,212.1	124,771.4	49.1	44.7	464,437.7	162,223.0	34.9

Source: FIES, 2000 (sample: 7,154 households) & 2006 (sample: 8,971 households).

The differential income effect across quintiles can be better appreciated in Figure 3.

Figure 3. Percentage change in household income due to remittance by quintile (households with remittance), 2000-2006



In Mexico, which is the third highest remittance recipient country (the Philippines being the fourth), as mentioned above, the welfare-enhancing effect of remittances is quite the opposite. Latapi and Janssen (2006) finds that while the mean remittance amount also increases with income quintile for remittance-receiving households, as in the Philippines, remittances account for as much as 81% of total household incomes for the lowest quintile, dropping monotonically to 23% for the top quintile.[7]

The substantial impact of remittances on household well-being in Mexico may be explained by the fact that as much as 61% of all households receiving remittances fall in the bottom quintile, the highest in Latin America, followed by Paraguay at 42% (Acosta, Fajnzylber, and Lopez 2007). This is not the case in the Philippines where larger proportions of remittance recipient households belong to the upper income groups and only around 5% fall in the bottom quintile.

5.1.1 Remittances adjusted for foregone domestic earnings

The welfare-enhancing effect of remittances shown above may be overstated as it does not consider the counterfactual, namely, what if the migrant, who was earning prior to leaving, had stayed home? This means that household total income *sans* remittance would be reduced by the departure of the migrant. Thus, there is a need to account for the foregone earnings to better approximate the net effect of remittances on household incomes.

Assuming one migrant per household and that the average earnings per worker prior to migration approximate mean non-remittance income per capita, this amount is deducted from household non-remittance income.[8] The adjustment is done in Table 3 which shows that the

[7] If remittances are computed as increases over household incomes without remittance, as is done for the Philippines in Table 2 above, the rise in total household incomes for remittance recipient households would be a massive 426% for the poorest quintile, falling monotonically to 29.6% for the richest (Latapi and Janssen 2006, Table 4, p. 13).

[8] Mean non-remittance income per capita seems like a reasonable proxy for migrants' average foregone domestic earnings as, in all likelihood, not all migrants were employed prior to departure for such reasons as over-qualification for available jobs, discouraged worker phenomenon, preoccupation with departure plans, etc.

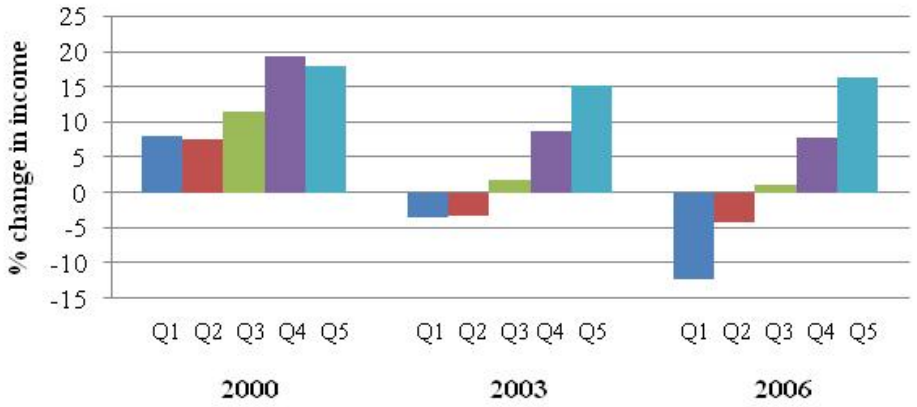
effect of remittances on household incomes is much more modest compared with that shown in Table 2. Worse, the adjusted with-remittance incomes for the first and the second quintiles are reduced by about 12% and 4%, respectively, in 2006 (col. 5) though less so in 2003, as Figure 4 shows.[9] Still, the welfare-enhancing effect of remittances rises consistently with income quintile.

Table 3. Household income without and with remittance adjusted for domestic earnings foregone due to migration (households with remittance), 2000 & 2006

(1) Income quintiles	2000		2006	
	(2) Adjusted income w/ remittance	(3) Remittance raises adjusted income by (%)	(4) Adjusted income w/ remittance	(5) Remittance raises adjusted income by (%)
1	27,250.0	8.0	39,051.56	-12.3
2	47,146.2	7.6	71,331.82	-4.3
3	73,459.2	11.4	114,430.61	1.0
4	121,162.2	19.2	197,298.26	7.8
5	299,668.6	17.9	540,367.67	16.3

Source: FIES, 2000 (sample: 7,154 households) & 2006 (sample: 8,971 households).

Figure 4. Percentage change in household income adjusted for domestic earnings foregone due to migration (households with remittance), 2000-2006



5.2 Remittances and poverty reduction

Table 4 illustrates how remittances matter to poverty reduction. In the absence of remittances, there would have been more than 28 million persons, or 37% of the total population (col. 2), considered poor in 2000 (according to the official definition of poverty) belonging predominantly to the first two quintiles. In 2006, the corresponding numbers were more than 30 million persons or 36% of the total population (col. 5). But with remittances, poverty headcount was lower at 25.9 million and poverty incidence at 33.5% in 2000 (col. 3), and in 2006, 26.9 million and 32%, respectively (col. 6). Poverty incidence was only slightly

[9] Perhaps, due to the assumption that at least one household member was earning average income prior to departure which may not be true of the first and second quintiles.

reduced for the first two quintiles but practically wiped out for the upper quintiles in 2000 (col. 4) though not quite in 2006 (col. 7).

Table 4. Poverty incidence by income quintile (all households), 2000 & 2006

(1) Income quintile	2000			2006		
	Incidence		(4) Change (%)	Incidence		(7) Change (%)
	(2) Without remittance (%)	(3) With remittance (%)		(5) Without remittance (%)	(6) With remittance (%)	
1	99.5	99.5	-0.0	83.0	82.3	-0.8
2	47.4	44.1	-6.9	63.9	61.5	-3.8
3	6.0	0.5	-91.6	30.7	25.9	-15.6
4	4.4	0.0	-100.0	11.0	4.7	-57.5
5	3.3	0.0	-100.0	4.6	0.3	-94.5
Total (%)	36.7	33.5	-8.6	35.9	32.0	-10.8
Total ('000)	28,274.3	25,855.9	-8.6	30,105.6	26,852.1	-10.8

Source: FIES, 2000 (sample: 203,454 persons) & 2006 (sample: 185,845 persons).

Focusing on remittance recipient households (Table 5) reveals that the effect in terms of poverty reduction was more pronounced as total poverty incidence fell in 2006 from about 28% without remittance to 12% with remittance (cols. 5 and 6). Likewise, the poverty reduction effect improved to -14.5% for the poorest and to -30% for the next poorest (col. 7).

Table 5. Poverty incidence by income quintile (households with remittance), 2000 & 2006

(1) Income quintile	2000			2006		
	Incidence		(4) Change (%)	Incidence		(7) Change (%)
	(2) Without remittance (%)	(3) With remittance (%)		(5) Without remittance (%)	(6) With remittance (%)	
1	100.0	99.6	-0.5	80.2	68.6	-14.5
2	75.0	40.7	-45.7	67.2	47.1	-29.9
3	32.7	0.0	-100.0	43.8	20.8	-52.5
4	17.1	0.0	-100.0	22.8	2.9	-87.5
5	9.1	0.0	-100.0	10.4	0.3	-97.3
Total (%)	28.6	10.2	-64.2	28.4	12.1	-57.2
Total ('000)	3,767.0	1,348.5	-64.2	5,686.3	2,432.7	-57.2

Source: FIES, 2000 (sample: 35,749 persons) & 2006 (sample: 42,851 persons).

On the whole, the results parallel those for the income effect of remittances. The poor appear to benefit from remittances but only modestly compared with the richer households. Given that bigger proportions of the upper income groups receive remittances and, indeed, greater average amounts of these inflows, the beneficial effect of remittances is skewed in their favour. A similar modest effect is reported by Acosta, Fajnzylber and Lopez (2007) in the case of Latin America, except perhaps in Mexico and Paraguay where large proportions of households receiving remittances belong to the poorest quintile.

5.3 Internal remittances

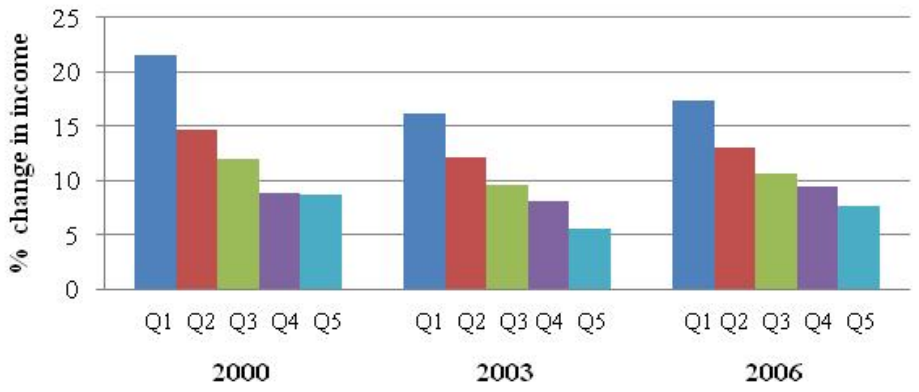
Apart from international remittances, households do benefit from internal (or domestic) remittances as well. Table 6 presents data on household incomes with international remittances but without and with internal remittances. This shows that the proportion of households receiving internal remittances is highest for the bottom quintile at 43-56% for 2000 and 2006, respectively, and declines consistently to 20-31% for the top income group (cols. 2 & 6). And while the average remittance amount still increases monotonically with income quintile (cols. 4 & 8), the effect on household incomes is the reverse that of the international remittances: it is strongest for the poorest at 17-22%, dropping also consistently to 11-12% for the middle quintile, then to 8-9% for the richest (cols. 5 & 9). This pattern is portrayed graphically in Figure 5.

Table 6. Household income without and with domestic remittance (households with domestic remittance), 2000 & 2006

(1) Income quintile	2000				2006			
	(2) HHs receiving domestic remittance (%)	(3) Income w/o domestic remittance	(4) Mean domestic remittance	(5) Remittance raises income by (%)	(6) HHs receiving domestic remittance (%)	(7) Income w/o domestic remittance	(8) Mean domestic remittance	(9) Remittance raises income by (%)
1	42.7	25,690.8	5,537.4	21.6	55.8	34,782.9	6,046.9	17.4
2	39.1	50,273.9	7,371.7	14.7	52.0	64,425.9	8,405.6	13.0
3	36.7	80,584.2	9,646.9	12.0	50.6	100,578.9	10,670.1	10.6
4	30.6	134,740.6	12,016.8	8.9	44.0	163,389.9	15,318.0	9.4
5	20.0	315,294.3	27,429.3	8.7	30.5	380,902.8	29,153.4	7.7

Source: FIES, 2000 (sample: 13,126 households) & 2006 (sample: 17,453 households).

Figure 5. Percentage change in household income due to domestic remittance (households with domestic remittance), 2000-2006



It thus appears that internal remittances are, at the margin, both more welfare-enhancing for the lower quintiles and inequality-improving than are international remittances, which is consistent with the finding for Guatemala (Adams 2006). This is attributable to the fact that a good deal of internal migration is made up of rural-urban migrants who may work in lowly occupations (e.g., domestic help) but are nonetheless the principal sources of support to poor households in rural areas.

6. Econometric Analysis

6.1 Remittances, household incomes, and poverty

The foregoing discussion of remittances, household incomes, and poverty can be enhanced by econometric analysis. This addresses the question: to what extent can remittances raise household incomes and alleviate poverty, and influence investment in human capital, labor force participation and household saving, controlling for the confounding influence of other variables?[10]

Table 7 shows that the effect of remittances (remit) on household incomes is positive and highly significant, controlling for the education of household head (hheduc), dependency ratio (depratio), and the income class of the province of residence. The negative sign of depratio for quintile 2 is as expected though not the positive sign for quintile 1.[11]

Table 7. Remittances and household incomes

A. Quintile 1

HHinc	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
remit	0.3776106	0.0472543	7.99*	0.0000	0.2849821	0.470239
hheduc	637.4871	30.5207	20.89*	0.0000	577.66	697.3141
depratio	1767.899	114.628	15.42*	0.0000	1543.204	1992.594
provcls	221.5056	208.9244	1.06	0.2890	-188.0304	631.0417
cons	29761.26	301.8917	98.58	0.0000	29169.49	30353.03

No. of obs = 9,589; R2 = 0.0780.

B. Quintile 2

HHinc	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
remit	0.1031346	0.0150036	6.87*	0.0000	0.0737242	0.132545
hheduc	246.719	25.15235	9.81*	0.0000	197.4149	296.0232
depratio	-329.0217	100.4025	-3.28*	0.0010	-525.8328	132.2105
provcls	24.4642	179.9667	0.14	0.8920	-328.3103	377.2387
cons	60904.04	277.2191	219.70	0.0000	60360.63	61447.45

No. of obs = 9,226; R2 = 0.0171.

Note: Asterisked t-values denote significance at 10% level or better.

[10] Appendix Tables 1 and 2 present the definition of the variables and their descriptive statistics, respectively.

[11] The results for quintiles 3-5 are also highly significant and show the correct signs for both remit and the control variables. These are not presented here owing to space constraints. The data for this and subsequent regressions are from FIES, 2003.

Table 8 shows that remittances (remitdm) strongly influence education spending per school-age member, controlling for non-remittance income (noreminc) besides the other variables. Similar results are shown in Table 9 in the case of health care expenditure per household member. To illustrate, remittance-receiving households are able to spend 1,788 pesos more for education per school-age member compared with households that do not get remittances, and the corresponding incremental amount for health care is 668 pesos per household member.

Table 8. Education spending per school-age household member

Educ	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
remitdm	1788.243	81.7339	21.88*	0.0000	1628.043	1948.443
noreminc	0.0063706	0.0001393	45.73*	0.0000	0.0060975	0.0066436
hheduc	263.7683	8.847238	29.81*	0.0000	246.4275	281.109
dep_ratio	-782.0801	42.431	-18.43*	0.0000	-865.2457	-698.9145
provcls	125.9157	62.39291	2.02*	0.0440	3.624344	248.2071
_cons	-865.7164	103.3892	-8.37	0.0000	-1068.361	-663.0714

No. of obs = 42,094; R2 = 0.1154

Note: Asterisked t-values denote significance at 10% level or better.

Table 9. Health care spending per household member

Health	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
remitdm	667.5469	74.38437	8.97*	0.0000	521.7521	813.3418
noreminc	0.0031115	0.0001268	24.54*	0.0000	0.0028631	0.00336
hheduc	29.30999	8.051692	3.64*	0.0000	13.52851	45.09147
dep_ratio	-274.5437	38.61559	-7.11*	0.0000	-350.231	-198.8563
provcls	11.33038	56.78253	0.20	0.8420	-99.96453	122.6253
_cons	129.8337	94.09243	1.38	0.1680	-54.5894	314.2568

No. of obs = 42,094; R2 = 0.0216

Note: Asterisked t-values denote significance at 10% level or better.

Table 10 shows that, other things being equal, remittances (remitdm) appear to exert a negative effect on the share of employed persons in the household (employshr,), while income *sans* remittance has a positive sign. This negative effect on total household work effort may be interpreted as a complacency effect, as also reported by earlier studies in El Salvador (Acosta 2007) and in the Philippines (Rodriguez and Tiongson 2001; Tullao, Cortes and See 2007). Alternatively, it may be that children who used to work stop working to go to school.

Table 10. Proportion employed of total members household members

Employshr	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
remitdm	-0.0659184	0.002665	-24.74*	0.000	-0.0711416	0.0606953
noreminc	2.15E-08	4.54E-09	4.73*	0.000	1.26E-08	3.04E-08
hheduc	-0.0010258	0.000285	-3.56*	0.000	-0.0015912	0.0004604
dep_ratio	-0.1417146	0.001383	-102.44*	0.000	-0.1444261	0.1390031
provcls	0.0046177	0.002034	2.27*	0.023	0.0006305	0.0086049
cons	0.5149325		152.76	0.000	0.5083255	0.5215395

No. of obs = 42,094; R2 = 0.2088

Note: Asterisked t-values denote significance at 10% level or better.

As regards household saving behavior, remittances, *ceteris paribus*, seem to have a positive and significant effect on it, while education has the expected positive sign and dependency ratio the expected negative effect (Table 11). Remittances per se can raise household saving rate by about 3.0%. When remittances are expressed as a ratio to total household income among households with remittances, the positive saving effect remains significant.

Table 11. Proportion of household savings to total income

Saveshr	Coef.	Std. Err.	t	P > |t|	[95% Conf. Interval]	
remitdm	0.0314375	0.0027646	11.37*	0.0000	0.0260188	0.0368561
noreminc	1.74E-07	4.71E-09	36.87*	0.0000	1.64E-07	1.83E-07
hheduc	0.0042923	0.0002993	14.34*	0.0000	0.0037057	0.0048788
dep_ratio	-0.0341328	0.0014352	-23.78*	0.0000	-0.0369458	-0.0313197
provcls	0.010094	0.0021104	4.78*	0.0000	0.0059576	0.0142304
_cons	0.018565	0.0034971	5.31	0.0000	0.0117107	0.0254193

No. of obs = 42,094; R2 = 0.0677

Note: Asterisked t-values denote significance at 10% level or better.

Table 12 gives the results of logit regression which shows that the share of remittances in household income (remitshr) raises the likelihood of a household getting out of poverty, other things being equal. However, the signs for education of household head (hheduc) and for dependency ratio (depratio) are the opposite of what would be expected.

Table 12. Remittances and getting out of poverty

Pov-out1	Coef.	Std. Err.	z	P > |z|	[95% Conf. Interval]	
remitshr	6.022487	0.1600771	37.62*	0.0000	5.708742	6.336232
hheduc	-0.161073	0.0107673	-14.96*	0.0000	-0.1821764	-0.1399695
depratio	0.5059208	0.04648	10.88*	0.0000	0.4148216	0.59702
provcls	-0.1902766	0.0752143	-2.53*	0.0110	-0.3376938	-0.0428593
cons	-3.014069	0.134426	-22.42	0.0000	-3.277539	-2.750599

No. of obs. = 8,279; Pseudo R2 = 0.3427

Note: Asterisked z-values denote significance at 10% level or better.

6.2 Remittances and regional development

The question whether remittances contribute to the well-being of communities or development at the local level can be examined through econometric analysis of the regional data. Based on the literature review, the hypothesis is that remittances benefit not only the recipient households directly but also the non-recipient households in the local economy via the multiplier effects of increased spending by remittance-recipient households.

Regression equations

The model has three main variables – welfare of the poor (proxied by expenditure of the poor), remittances, and gross regional domestic product (GRDP). These variables are considered to be endogenous, hence, requiring three equations:

$$EXPOOR_{rt} = EXPOOR_{rt}(REMIT_{rt}, GRDP_{rt}, LOCAL_{rt}) \quad (1)$$

$$REMIT_{rt} = REMIT_{rt}(GRDP_{rt}, LOCAL_{rt}) \quad (2)$$

$$GRDP_{rt} = GRDP_{rt}(REMIT_{rt}, LOCAL_{rt}) \quad (3)$$

where

$EXPOOR_{rt}$ = expenditure per capita of the poor in region *r* at time *t*

$REMIT_{rt}$ = remittance per capita in region *r* at time *t*

$GRDP_{rt}$ = income per capita in region *r* at time *t*

$LOCAL_{rt}$ = local factors/initial conditions in region *r* at time *t*

$LOCAL_{rt}$ is a vector of exogenous local factors or initial conditions that serve as control variables. These include human and physical infrastructures, such as average schooling years of household heads (hheduc), employment ratio (employr), dependency ratio (dep-ratio), initial primary and secondary school participation rates (elempr0 and hspr0), initial infant mortality rate (infmort0), initial road density (roads-to-area ratio, road0), initial electricity and water supply coverage (elect0 and water0).

Equation 1 shows how the welfare of the poor is influenced by the region's GRDP per capita, remittance per capita, and local factors or attributes. Equations 2 and 3 take into account the endogeneity of GRDP and remittances as both are affected by each other and by local factors.

Equations 1-3 are estimated using the three-stage least squares (3SLS) method. The 3SLS estimation procedure takes into account not only the endogeneity of the three variables (expenditure of the poor, remittances, and regional income) but also the interaction between equations through the covariance matrix of the equations' disturbances. To test for dynamic effects, current as well as lagged values are used.[12]

For the estimation, panel data on 15 regions for the years 1994, 1997, 2000, and 2003 are used.[13] The data on remittances and household expenditures are from the merged FIES, SOF and LFS; gross regional domestic product (GRDP) from the national income accounts; and various socioeconomic data from records of relevant government agencies. The remittance data set is much bigger than the one used in Pernia (2007) which was solely from the SOF.

Expenditure rather than income of the poorest 40% (quintiles 1 and 2) is adopted to indicate the welfare of the poor. For theoretical and practical reasons, mean consumption expenditure is deemed superior to mean income as a measure of welfare (Deaton 1997). The theoretical basis is the permanent income hypothesis; moreover, in practice, current income is more difficult and costly to measure in developing countries where the majority of the poor are self-employed and engaged in agricultural activities with fluctuating incomes.

Empirical results

The regression results are mostly in accord with expectations. Table 13 shows that remittances have a positive and significant effect on the well-being of poor households, as

[12] Appendix Tables 1 and 3 present the definition of the variables and their descriptive statistics, respectively.
[13] The regions are as classified in 2004 and this regional classification is used consistently throughout the period.

reflected in higher family spending per capita of the bottom quintile (q1), after controlling for the effects of other variables. To illustrate, an increase of P1,000 in remittance per capita results in P1,789 additional annual family spending per person among the poorest quintile. Roads, education (hheduc), and health (infmort0) also appear to be particularly important factors that improve the poor's

Table 13. Remittances, HH expenditure, and GRDP (Quintile 1)

Expoor_q1	Coefficient	t-value	P>|t|	[95% Conf. Interval]	
GRDP_pc	-34.5606800	-1.33	0.1850	-85.6594	16.5381
remit_pc	1788.9000000	2.31*	0.0210	268.8319	3308.9690
roadd0	733.7590000	4.58*	0.0000	420.0030	1047.5150
infmort0	-33.8221100	-2.55*	0.0110	-59.8581	-7.7861
hheduc	224.8272000	3.06*	0.0020	80.7198	368.9345
employr	187.4082000	0.10	0.9190	-3441.6500	3816.4660
elempr0	15.4874300	0.81	0.4190	-22.0739	53.0487
hspr0	0.8359953	0.10	0.9200	-15.5670	17.2389
_cons	187.8218000	0.12	0.9040	-2866.8780	3242.5210
remit_pc					
GRDP_pc	-0.0152769	-1.02	0.3060	-0.0446	0.0140
roadd0	0.1751564	2.87*	0.0040	0.0555	0.2948
infmort0	0.0043699	0.59	0.5530	-0.0101	0.0188
hheduc	0.0032430	0.10	0.9180	-0.0586	0.0651
employr	-2.4772770	-3.05*	0.0020	-4.0715	-0.8830
dep_ratio0	-0.0257910	-6.04*	0.0000	-0.0342	-0.0174
_cons	3.6105720	5.9*	0.0000	2.4103	4.8108
GRDP_pc					
remit_pc	7.7237530	6.65*	0.0000	5.4486	9.9989
roadd0	1.0803020	2.24*	0.0250	0.1355	2.0251
infmort0	-0.2704564	-4.35*	0.0000	-0.3923	-0.1486
hheduc	0.6211327	2.25*	0.0250	0.0798	1.1625
employr	13.9878900	1.82*	0.0680	-1.0569	29.0327
water0	14.1068700	7.41*	0.0000	10.3756	17.8382
_cons	-4.1273570	-1.17	0.2440	-11.0638	2.8090

Equation	Obs	Parms	RMSE	R-sq	F-stat	P
expoor_q1	60	8	366.8176	0.9246	722.74	0.0000
remit_pc	60	6	0.205097	0.7051	154.52	0.0000
GRDP_pc	60	6	2.022557	0.8624	387.82	0.0000

Note: Asterisked t-values denote significance at 10% level or better.

welfare; by contrast, overall increases in regional incomes (GRDP) per capita do not seem to matter to the poor's well-being. As the third panel of Table 13 shows, remittances appear to contribute significantly to regional development through increased spending for consumption, human capital and housing investments, and consequent multiplier effects. However, because the more advanced regions tend to get bigger shares of the total, remittances may contribute

to regional divergence rather than convergence (Go 2002; Pernia 2006). As expected, roads, water, education and health infrastructures are critical to regional development.

Table 14 shows that the regression results for the next poorest 20% of households (quintile 2) closely resemble those for the poorest quintile. Here, additional spending rises to P2,177 for every P1,000 incremental per capita remittance. The magnitude of this positive effect on household well-being continues to rise for quintile 3 but becomes insignificant for the next higher quintiles.[14] This is not surprising as remittances probably matter less to the richer families.

Table 14. Remittances, HH expenditure, and GRDP (Quintile 2)

Expoor_q2	Coefficient	t-value	P>|t|	[95% Conf. Interval]	
GRDP_pc	19.7960100	0.64	0.5200	-40.4793	80.0713
remit_pc	2176.7630000	2.38*	0.0180	380.9168	3972.6100
roadd0	634.9709000	3.36*	0.0010	264.4181	1005.5240
infmort0	-34.0943700	-2.17*	0.0300	-64.8396	-3.3492
hheduc	365.9736000	4.22*	0.0000	195.9233	536.0239
employr	-192.9370000	-1.00	0.3160	-6480.2480	2094.3740
elempr0	36.1213400	1.60	0.1100	-8.1753	80.4180
hspr0	-9.9495820	-1.01	0.3130	-29.2814	9.3822
_cons	-995.3467000	-0.54	0.5880	-4597.0710	2606.3770
remit_pc					
GRDP_pc	-0.0152769	-1.02	0.3060	-0.0446	0.0140
roadd0	0.1751564	2.87*	0.0040	0.0555	0.2948
infmort0	0.0043699	0.59	0.5530	-0.0101	0.0188
hheduc	0.0032430	0.10	0.9180	-0.0586	0.0651
employr	-2.4772770	-3.05*	0.0020	-4.0715	-0.8830
dep_ratio0	-0.0257910	-6.04*	0.0000	-0.0342	-0.0174
_cons	3.6105720	5.9*	0.0000	2.4103	4.8108
GRDP_pc					
remit_pc	7.7237530	6.65*	0.0000	5.4486	9.9989
roadd0	1.0803020	2.24*	0.0250	0.1355	2.0251
infmort0	-0.2704564	-4.35*	0.0000	-0.3923	-0.1486
hheduc	0.6211327	2.25*	0.0250	0.0798	1.1625
employr	13.9878900	1.82*	0.0680	-1.0569	29.0327
water0	14.1068700	7.41*	0.0000	10.3756	17.8382
_cons	-4.1273570	-1.17	0.2440	-11.0638	2.8090

Equation	Obs	Parms	RMSE	R-sq	F-stat	P
expoor_q2	60	8	429.584	0.9389	890.33	0.0000
remit_pc	60	6	0.205097	0.7051	154.52	0.0000
GRDP_pc	60	6	2.022557	0.8624	387.82	0.0000

Note: Asterisked t-values denote significance at 10% level or better.

[14] The regression results for quintiles 3-5 are not presented here due to space constraints but are available with the author.

Another result worth noting in Tables 13 and 14 is that while the impact of an increase in regional income (GRDP per capita) on household welfare is insignificant for quintiles 1 and 2, it is positive and significant for quintiles 3-5, with the size of the positive effect increasing monotonically. This suggests that regional development in general does not benefit low-income households as much as the higher income families, which is consistent with earlier findings based on provincial data (Balisacan and Pernia 2003).

Does the positive impact of remittances on the expenditure of the poor in the regions translate into poverty reduction or the poor getting out of poverty? Table 15 presents the results of 3SLS regression using the model [equations (1)-(3)] above, but substituting the proportion of households who are able to surmount the poverty threshold (povout2) for expenditure of the poor (expoor). Consistent with the results discussed above, remittances do seem to have a positive and significant effect on poverty reduction, i.e., the higher the ratio of remittance per capita to GRDP per capita (remitshr2), the greater the proportion of poor households getting out of poverty (povout2). To illustrate, a 10% increase in remitshr2 results in a 2.6% rise in the proportion lifted out of poverty. The control variables (reflecting human capital stock) are also significant and have the correct signs, namely, lagged infant mortality rate (infmort0) and lagged high school participation rate of population aged 13-16.

Table 15. Remittances, poverty reduction, and GRDP

Variable	Coef.	Std. Err.	z	P > |z|	[95% Conf. Interval]	
povout2						
remitshr2	0.2576122	0.073465	3.51*	0.0000	0.1136218	0.4016026
infmort0	-0.0007451	0.000435	-1.71*	0.0870	-0.0015984	0.0001082
hspr0	0.0004809	0.000153	3.12*	0.0020	0.0001793	0.0007825
_cons	-0.0055738	0.009798	-0.57	0.5690	-0.0247776	0.0136301
remit_pc						
grdp_pc	-0.0254725	0.015375	-1.66*	0.0980	-0.0556069	0.0046618
roadd0	0.213839	0.063027	3.39*	0.0010	0.0903082	0.3373699
infmort0	0.0018616	0.007635	0.24	0.8070	-0.0131045	0.0168277
hheduc	0.0129546	0.032650	0.40	0.6920	-0.0510388	0.076948
employr	-2.430346	0.843813	-2.88*	0.0040	-4.08419	-0.7765026
dep_ratio0	-0.0269341	0.004435	-6.07*	0.0000	-0.0356265	-0.0182416
_cons	3.761769	0.635488	5.92	0.0000	2.516234	5.007303
grdp_pc						
remit_pc	5.078041	1.051485	4.83*	0.0000	3.017168	7.138913
road0	1.787525	0.465865	3.84*	0.0000	0.8744443	2.700605
infmort0	-0.2354732	0.062374	-3.78*	0.0000	-0.3577255	-0.1132208
hheduc	0.5714185	0.278638	2.05*	0.0400	0.0252967	1.11754
employr	11.83606	7.736603	1.53	0.1260	-3.327401	26.99953
water0	13.32879	1.917441	6.95*	0.0000	9.570675	17.0869
_cons	-2.062298	3.549034	-0.58	0.5610	-9.018276	4.893681

Equation	Obs	Parms	RMSE	R-sq	chi2	P
povout	60	3	0.0161765	0.3166	31.13	0.0000
remit_pc	60	6	0.213836	0.6794	140.35	0.0000
GRDP_pc	60	6	2.017302	0.8631	361.07	0.0000

Note: Asterisked z-values denote significance at 10% level or better.

The third panel of Table 15 shows that remittance per capita (remit_pc) has a positive and significant effect on regional income per capita (grdp_pc), reflecting regional development, through increased spending for consumption, human capital and housing investments, and consequent multiplier effects. Moreover, initial physical infrastructure (road0 and water0) and human infrastructure (hheduc and infmort0) are important for regional development.

7. Conclusion and Policy Implications

This paper took off from the premise that the Philippines appears to be stuck as a labor exporter owing to the twin policy mistakes: (i) a long-lived import-substitution industrialization policy, whose protectionist policy instruments probably helped nurture the culture of corruption that has permeated the social fabric, and (ii) a short-lived population policy. The consequence essentially has been and continues to be too many Filipino workers chasing too few jobs in the domestic economy.

International remittances appear to raise average incomes for all income groups but more so for the richer households than for the poorer ones. Adjusted for the migrants' foregone domestic earnings, the income effect turns out even more modest, particularly for the lower income groups, a finding consistent with that in several Latin American countries. The higher income quintiles have proportionately more households receiving remittances and, indeed, receiving bigger amounts, suggesting that remittances contribute to a skewing of income distribution across households. By contrast, domestic remittances appear to be more welfare-enhancing for the lower income households than are international remittances.

Econometric analysis reveals that, other things being equal, remittances do significantly enhance household incomes and savings, raise spending on education and health care, and help the poor move out of poverty. However, remittances may also result in complacency as household members left behind tend to reduce participation in the work force.

Analysis at the regional level further shows that, *ceteris paribus*, remittances improve the welfare of poor households and help them surmount the poverty threshold. Likewise, remittances also appear to contribute importantly to regional development through increased spending for consumption and investment in human capital and housing, and consequent multiplier effects. However, overall increases in regional incomes do not seem to benefit low income households as much as the upper income ones.

The apparent regressive distribution of remittances and their effects may be contributing to the persistence of high income inequality in the country, as reflected in a sticky Gini coefficient (e.g., 0.4605 in 2003 and 0.4580 in 2006). In turn, such high inequality tends to dampen the poverty reduction effect of remittances; indeed, the latest FIES reveals that the national poverty incidence rose from 30% in 2003 to 32.9% in 2006.

On the whole, international remittances appear to have greatly helped Philippine households and communities muddle through over the past three decades or so. However, it would seem that labor export cannot be relied upon as a policy for reducing poverty, redressing income inequality and, for that matter, fostering the country's long-run development. In the coming years, as the global labor market demands higher-level professional and technical workers, and to the extent that Philippine labor supply can respond, remittances could result in persisting social inequality.

Likewise, although remittances seem to have greatly benefited the macro-economy in terms of its external current account, debt service, and some unemployment relief, the remittance bonanza appears to have made it easy for the government to shirk difficult policy reforms. Other Asian countries, such as South Korea and Thailand, that adopted labor export as a temporary measure did pursue policy reforms on both labor demand and labor supply sides, enabling their economies to move up to rapid and sustained growth paths.

Migration is arguably causing brain drain, not to mention the psychosocial costs borne by the migrants themselves and their families left behind. It seems obvious that continued reliance on labor export is bound to further compromise the country's human capital requirements for long-term development. The human capital industry has its limits.

Is the export of labor sustainable? Are we content with being a labor exporter? If we are, what needs to be done to stretch the limits of our human capital industry? If we are not content, what is the alternative? In general, is there a need to rethink the country's labor export policy?

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Appendix

Table 1. Definitions of variables

Variable	Definition	Source
dep_ratio	dependency ratio (pop 0-15/15+)	FIES
dep_ratio0	lagged dependency ratio	FIES
educ	education spending per school age household member	FIES
employr	ratio of employed persons (old definition) to total household population	LFS, FIES
employshr	ratio of employed persons to household members	FIES
expoor	expenditure of the poor	FIES
grdp_pc	gross regional domestic product per capita (1985 prices)	NIA, FIES
hheduc	average numbers of years of education of household head	FIES
hspr0	lagged high school participation rate of pop 13-16 years old	DECS
infmort0	lagged infant mortality rate	NSO
medic	medical care spending per household member	FIES
noreminc	total household income net of remittance	FIES
povout1	dummy (1 = graduates from poverty line due to remittance, 0 = otherwise)	FIES
povout2	proportion of families who graduates from the poverty line due to remittance	FIES
provcls	provincial income classification	BLGF
remit	remittance (cash receipts, gifts, support, relief and other forms of assistance from abroad)	FIES
remit_pc	remittance per capita (1985 prices)	FIES
remitdm	dummy (1 = household with remittance, 0 = otherwise)	FIES
remitshr1	share of remit to total household income	FIES
remitshr2	ratio of remit_pc to GRDP_pc (1985 prices)	
roadd0	lagged road density (concrete or asphalt roads/land area)	DPWH
saveshr	ratio of savings to total household income	FIES
hhinc	total household income	FIES
water0	lagged proportion of households with potable water from faucets	FIES

Table 2. Descriptive statistics (cross-household regressions)

Variable	Obs	Mean	Std. Dev.	Min	Max
remit	42094	13158.18	55082.41	0	2140000
dep_ratio	42094	0.7242433	0.7673312	0	1
educ	42094	1864.379	7061.685	0	559000
employshr	42094	0.3987329	0.2434558	0	1
hheduc	42094	7.547774	3.864332	0	16
medic	42094	691.043	6111.153	0	1006770
noreminc	42094	124600.2	241352.3	0	3.23E+07
provcls	42094	1.120183	0.5197497	1	5
remitshr	42094	0.0549274	0.1566658	0	1
saveshr	42094	0.0657146	0.2326739	-4.955759	0.9507214
hhinc	42094	137758.4	250921.6	3086	3.23E+07

Table 3. Descriptive statistics (cross-region regressions)

Variable	Obs	Mean	Std. Dev.	Min	Max
dep_ratio0	60	81.09567	10.04073	60.71	103.74
drdp_pc	60	10.70567	5.498901	3.99	30.258
employr	60	0.3865906	0.0366899	0.3216036	0.4902301
hheduc	60	6.095167	1.280317	3.62	9.83
hspr0	60	59.583	14.84756	18.02	92.57
infmort0	60	16.30017	5.14708	4.67	25.29
povout2	60	0.0248601	0.0197332	0.0004254	0.0938789
remit_pc	60	0.5530909	0.380858	0.1219869	1.623024
remitshr	60	0.0540577	0.0312403	0.0139298	0.1498908
roadd0	60	0.3671133	1.007903	0.0256022	4.1863
water0	60	0.3813379	0.1805207	0.0858325	0.820852